

Low Back Pain

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The Backbone....

Your network for good health

Posture may be the first thing you think of when considering what the spine does for the body. It's interconnected bones form the curves in our back, allow us to sit up straight and also allow for movement.

The bones that make up the spine are called vertebrae. The only part of the vertebrae that is readily accessible for you to feel is what's called the spinous process, a bony protuberance. When you touch the middle of your back you will feel the bumpy track that goes up and down the middle. These are the spinous processes of each vertebrae in your back.

Your spine is made up of 26 vertebrae (more if you consider the sacrum and coccyx separately). Cartilagenous discs are located between the body of each one to provide support, help to

bear weight and protect the bones from wearing on each other. It is these discs that are the culprit when you hear of a "herniated disc".

If you look at the "top view" photo you will see a hole. This is where all the nerves from your brain that form the spinal cord travel through. Nerves then exit from the side of the bone in order to innervate specific organs and muscles.



View From Side



View From Top

What is a Vertebral Subluxation?

The bones of the spine are designed to move, while at the same time protecting the spinal cord and nerve roots. But, sometimes they become "stuck," and don't move enough. This can be caused by physical trauma such as repetitive motion, car accidents, slips, falls etc. Emotional stress such as anxiety affects the body by causing tension in the tissue with consequent postural changes and spinal subluxations. Chemicals such as

alcohol and drugs can also affect the normal motion and position of the spine.

When spinal joints are fixated or 'stuck' and not moving enough, they force other joints to move too much. These problems distort normal spinal curves and compromise proper function.

Doctors of Chiropractic are trained to identify and correct vertebral subluxations

LUMBAR FACET IRRITATION

Reach behind you and feel the centre of your back, just above the buttocks. This is your lumbar spine. Lumbar facet irritation usually is a painful condition affecting the joints. These are responsible for connecting the spine with protection, limiting excessive motion and preventing the vertebrae from locking together.

Patients suffering from lumbar facet irritation usually complain of a well localized low back pain, meaning they can pinpoint the exact site of discomfort. The condition is closely related to lumbar facet syndrome—however, patients with the latter also feel referred pain in one hip, buttock or upper leg. Facet irritation often precedes facet syndrome, usually if someone had the irritation treated properly. The onset of lumbar facet irritation is often sudden, occurring after a misjudged movement or while recovering from a bent position. These activities may stretch the joint capsules (which protect and support the joints) or jam the facet joints, causing subluxations

(restricted motion or abnormal positioning) in the spine and painful swelling. Other causes include poor posture, everyday wear-and-tear and trauma to the low back.

Symptoms of facet irritation usually get worse when people sleep on their stomach, work with their arms above their head or rise from a sitting position. All these activities expose the joints to stress that they are not accustomed to, making them more vulnerable to injury and irritation.

Chiropractic is effective for lumbar facet irritation and syndrome. Chiropractors perform a procedure called spinal manipulative therapy, also known as an adjustment, which relieves pain and restores function to misaligned or malfunctioning joints.

Massage Therapy and Low Back Pain

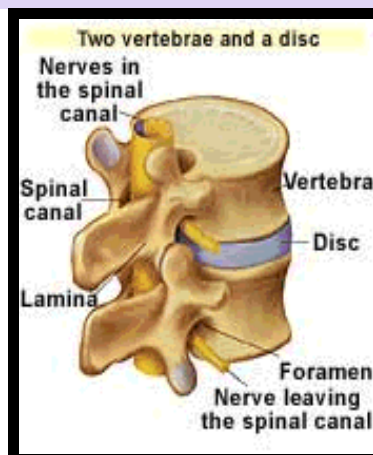
MOST PEOPLE, IN THEIR LIFE TIME, HAVE EXPERIENCED LOW BACK PAIN. IT IS ONE OF THE MOST COMMON MUSCULO-SKELETAL DISORDERS OF TODAY'S SOCIETY. MANY TIMES, PEOPLE WILL SUFFER THROUGH THE DISCOMFORT, NOT REALLY KNOWING THAT RELIEF IS JUST AROUND THE CORNER! DID YOU KNOW THAT THE CANADIAN MEDICAL ASSOCIATION JOURNAL PUBLISHED A STUDY RECENTLY ABOUT LOW BACK PAIN AND MASSAGE THERAPY? THE CON-

CLUSION WAS THAT OF THE PEOPLE WHO COMPLETED THE STUDY, 63% OF THE PEOPLE RECEIVING COMPREHENSIVE MASSAGE THERAPY REPORTED NO PAIN AFTER 1 MONTH. TO READ MORE ABOUT THIS STUDY YOU CAN GO TO THE CANADIAN MEDICAL ASSOCIATION JOURNAL WEB-SITE AND LOOK UP THE ARTICLE PUBLISHED IN THE JULY 27TH, 2000 EDITION.

DEGENERATIVE DISC DISEASE

The intervertebral discs in between each vertebrae provide cushioning and support of the spine. Structurally they are made of strong collagen connective tissue and water which help to resist against the compressive forces that are involved in our daily life. Trauma, infection, injury or aging sometimes cause the discs to dry out, stiffen or even rupture, resulting in pain as the nerves in the spinal column are exposed or compressed by the discs. The condition is called degenerative disc disease (DDD).

With age and progression the facet joints of the vertebrae (which allow for movement) become



involved as they are forced closer together by compression. Wear and tear is inevitable, pain and discomfort may follow.

If you are suffering from low back pain, especially in the low back or up in your neck and you are over the age of 40 you may want to talk to your doctor about having x-rays.

The degenerative process itself cannot be reversed however both massage and chiropractic can help maintain the alignment of the bones and the strength of the muscles in order to maintain joint mobility and stability.

Low Back: Lumbar Spine Subluxation (VSC)

Vertebral subluxation complex (VSC), which chiropractors often refer to simply as a subluxation, is fitting title for a condition that is extremely complex. There are 5 recognized components that contribute to this condition. To further its complexity, patients may not be aware that they have problem because initially, subluxations may not cause pain or discomfort.

Let's take a step back to where VSC of the lumbar spine occurs. The lumbar makes up the bottom of the spine, starting at the low back and ending just above your buttocks. It's below the thoracic spine, which makes up the mid back, and the cervical spine, which makes up the neck.

VSC in the lumbar spine occurs when vertebrae in the low back lose their normal motion or position, which can lead to local inflammation and affect the delicate nerves in the spinal cord that carry messages between the brain and the rest of the body.

These nerves, along with the brain, collectively make up the central nervous system. The nerves leave the spinal column through hole, formed between vertebral joints, and branch off and control the health and function of every cell, tissue and organ.

Suggests that subluxations affect how these parts function by interfering with the brain-body communication system. Imagine a healthy nervous system surrounded by clean water, and the interference as muddy and murky water that starts to pollute it.

A variety of external and internal factors can cause subluxations. Since chiropractic's inception, trauma, toxins and emotional stress have been identified as the primary causes of subluxation. Traumatic causes include car accidents and falls, chemical toxins include alcohol, drugs, and pollutants, and emotional stress includes everyday problems like worrying and anxiety.

When any of these are present, it can lead to the beginning of VSC, and possibly the entire 5 components of the condition. The first stage is kinesiopathy, which begins when spinal joints becomes stuck, forcing the joints around them to work harder in order to compensate. Unfortunately, this compensation does not change the fact that the spinal joints are not functioning properly, and thus the spine's normal curvature can distort and the stuck joints can contribute to nerve irritation.

Most often, this occurs when malfunctioning spinal bones stretch, twist or pull nerve tissue. When this is serious enough it can lead to neuropathology, the second stage of VSC, which can involve either extreme nerve irritation or a pinched nerve. Pinched

nerves, which are quite rare, can produce feelings patients describe as "pins and needles" or a numb sensation surrounding and even far from the spine. Irritated nerves can affect parts of the body they communicate with and increase a person's susceptibility to disease.

The interference in the nervous system can lead to the third component of VSC, myopathy, which involves abnormal muscle function. With myopathy,

nerve impulses can diminish to the point that they understimulate muscles, which causes the muscles to weaken and atrophy: or, they become strains and potentially go into spasm. Either of these problems can cause further complications by spreading to the rest of the soft tissues in the spine.

If that happens, it can lead to the fourth stage of VSC, histopathology, which involves abnormal function of soft tissue. This occurs when abnormal spinal joint function diminishes blood supply and leads to long-term swelling of structures like ligaments, discs and other soft tissues.

The fifth and final stage of VSC is pathophysiology. This is when degenerative changes in the spine begin to spread. At this stage calcium deposits may have built up, and are eventually recognizable as bone spurs and other abnormal growths. When this happens, your body has gone to the extreme of compensating for a malfunctioning or traumatized joint by actually creating new bone. It has slowly transformed immobile, untreated joints into solid blocks of calcium. Known as subluxation degeneration, this final component of VSC becomes more common as people get older.

While it take many years for someone to develop problems associated with the final component of VSC, the condition can begin at any age. That is why it is important to visit your chiropractor, as she can check for subluxation and provide you with ideal care. Your chiropractor will use an adjustment to correct your subluxations, which involve a high speed thrust that realigns faulty joints and allows the body to heal. Combined with proper spinal care and posture, this can prevent VSC from progressing into a more serious condition.



"Research has proven that... pressure on a spinal nerve can reduce the function of that nerve by 60% in a matter of minutes"

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How To Manage Your Sore Back

So you have pulled your back out by twisting, sleeping funny, bending incorrectly or some other activity. The question is **now what do you do?** First, make an appointment with your chiropractor. Your Doctor of Chiropractic will take a history and assess your condition to determine the cause of the pain and discomfort. This is determined by completing a physical exam specific to your problem area. The exam is only completed within your pain tolerance. The doctor at this stage has sufficient information to decide on the proper treatment plan which may include **spinal adjustments, trigger point therapy, interferential current and ice.**

Spinal adjustments help to restore motion in the joints that have limited motion. **Trigger point therapy** loosens up surrounding muscles and soft tissue so that you do not feel as stiff and tight. **Interferential current** is a therapeutic treatment that uses tiny amounts of electrical impulses to reduce pain, swelling, and accelerate the

healing process. This therapy is usually applied 15 to 20 minutes during the early stages of treatment. Ice is used to help reduce inflammation. It is recommended that you ice your back for twenty minutes every hour for approximately half the day. Place a thin cloth between the ice pack and your body to reduce the possibility of frostbite. During the initial stages of an injury ice is recommended over heat because ice reduces the amount of blood flow to the area whereas heat brings blood to area thus increasing inflammation.

Although, it may seem natural to move as little as possible when you hurt your back it is actually the worst thing you can do. Research has shown that bed rest makes the condition worse and prolongs recovery. The joints and muscles in your back need to move or they naturally get stiff and further limit your range of motion. The best exercise you can do with an injured back is swimming. Swimming is a non-weight bearing activity which means that gravity is not putting additional pressures on your spine. Swimming allows your arm and back muscles to work through a full range of motion while providing a cardiovascular benefit.

Once you have passed through the initial phase of care you will be ready for a more thorough second exam. With **decreased pain** and a **greater range of motion** you will be able to complete more of the tests and examination procedures that will help your doctor determine the underlying cause of your condition. At this stage your Chiropractor may suggest a set of **stretches and strengthening exercises** to help you complete the healing process. These exercises will help strengthen and stabilize your back to reduce the possibility of a reoccurrence. At this stage it is suggested that heat or **alternating heat with ice** be applied to the injured area of the back. At this point because there is a reduction of inflammation, heat may be used to relax the muscles in the area. Some people experience the largest benefit by alternating heat and ice. *Experiment to find out what works best for you.*